The Files

26 September 1957

[redacted] 25X1A9a

Conference Report - [redacted] Task 2, 3 and 5 25X1A5a1

1. A conference was held September 17 and 18, 1957 in the R+D/E 25X1A5a1 office with a representative of the [redacted] in connection with Tasks 2, 3 and 5. Those in attendance were:

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2. Task 2 - An estimate for adapting the standard AS-4 equipment for modified high-speed processing was submitted for consideration. This adaptation would consist of adding one or a pair of Soroban perforators operating at on-line speed with the necessary electronic circuitry to drive the punches. For a single punch, the first unit deliverable in about 6 months, the approximate cost would be:

| | | |
|---|---|---|
| 1st unit | $34,415 | |
| 2nd unit | 30,674 | |
| 3rd unit | 26,680 | Total $91,769 |

For a pair of punches the cost would be:

| | | |
|---|---|---|
| 1st unit | $50,479 | |
| 2nd unit | 44,835 | |
| 3rd unit | 40,183 | Total $135,497 |

3. This high-speed processing capability is not going to be considered at present. The AS-4A high-speed processing system will be evaluated first, then a decision can be reached.

4. Task 3 - An estimate of the cost for preparing manufacturing 25X1A5a1 drawings was submitted by the [redacted] The price for 1500 drawings would be about $205,000 about $140 per drawing. The AS-4A system is yet to be evaluated. Doubtless this evaluation will lead to changes in equipment design and circuitry and subsequently to drawing changes prior to production. Therefore, this proposal is being rejected as not feasible at this time.

5. The problem of rewinding the punched tape from the Soroban perforators is to be solved by the [redacted] There is adequate space for inserting torque motors to accomplish this. 25X1A5a1

6. Two KX-3 cryptographic machines for use with the AS-4A system will be delivered to Washington, D. C. in November.

7. [redacted] mentioned they are considering that sampling for error correction can be done earlier than the main pulse, in a space just before the main pulse where multipath has died out. 25X1A5a1

8. The possibility of employing FSK instead of the present on-off high power keying has been suggested. A gain of a few db is claimed. However, there would be a loss of power from the 231-D transmitter using FSK. More information is needed on this matter.

9. Task 5 - Several topics were considered in connection with this High Speed Field Station, AS-5.

1. Do we want to use plug-in front ends for the receiver instead of autotune units or possibly a turret tuner for switching of the 10 channels? More information is required from the [redacted] to answer this. 25X1A5a1

2. The available input power requirements were given as: a peak power of 2-2½ kilowatts; line voltage 90-140 volts, 180-280 volts; 45-60 cycles, single phase.

3. The transmitter tuning might be changed as often as once a month. The exciter should be replaceable with replaceable modules.

4. Tuning can be accomplished with radiated CW power reduced for about 20 seconds.

5. Antenna impedance and antenna coupler requirements are to be furnished to the [redacted] at a later date. 25X1A5a1

6. An antenna of variable length controlled by a motor driven reel was suggested for use with the AS-5.

7. A linear power amplifier will be acceptable if it costs little in efficiency, size or weight.

8. An input device considered for the AS-5 is the flexowriter. This can produce hard copy, perforate tape and provide inputs for a memory unit. It is possible to play the output of the AS-5 back into the same flexowriter. The approximate cost is $3000. Such a device is attractive for our use. For an output device, however, a high-speed tape printer giving an on-line high-speed output is preferred.

9. The question of synchronizing by blank insertion or self-synchronization using punched tape was brought up. The use of blank insertion was rejected if there were to be an advance in sprocket holes since this would negate any encipherment.

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